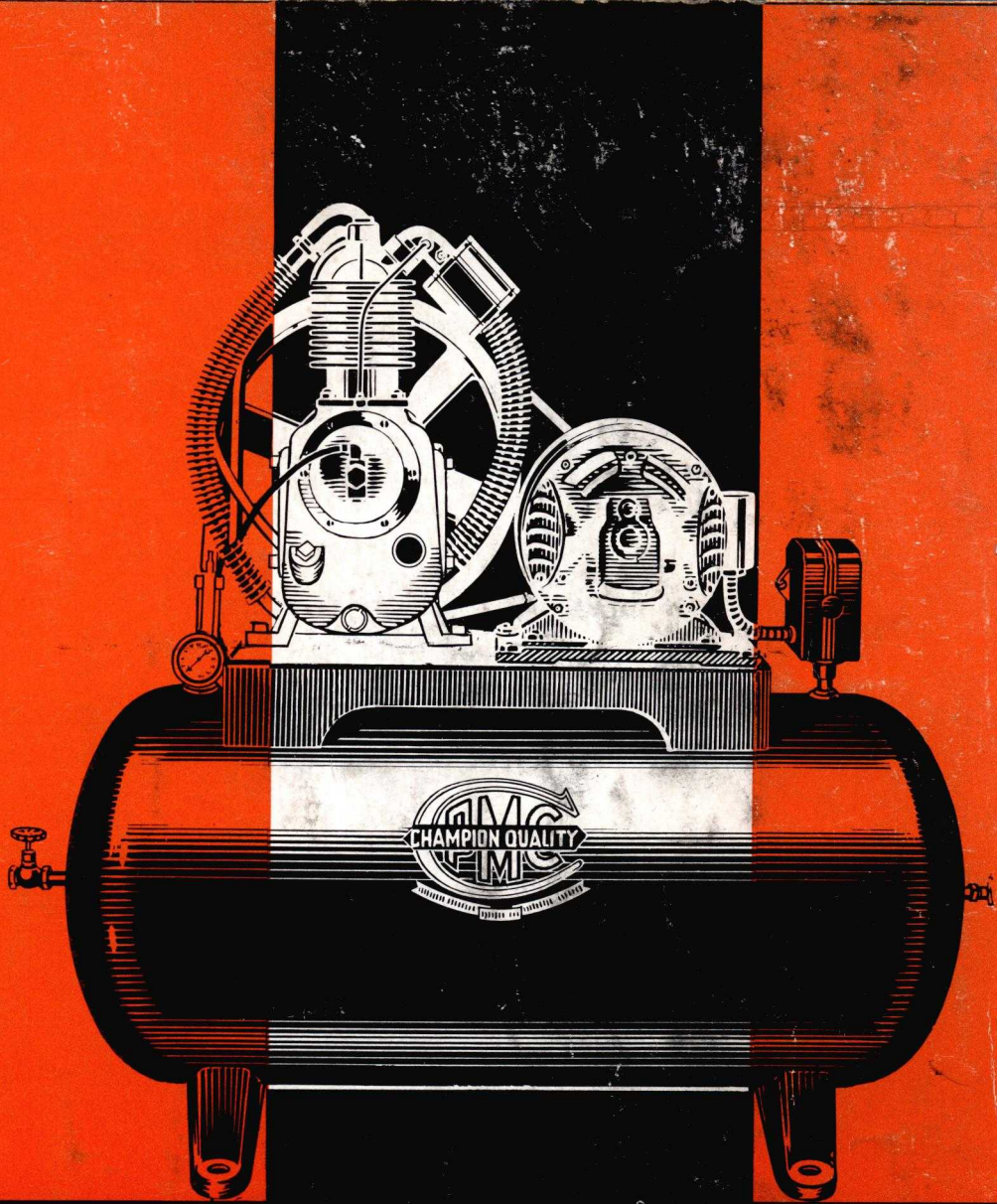


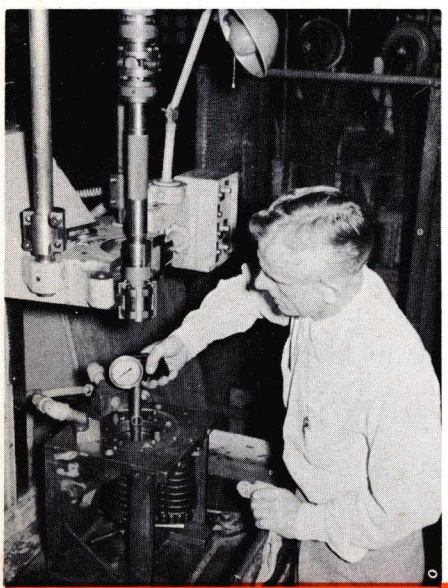
CHAMPION

AIR COMPRESSORS • CAR WASHERS • HOSE REELS
FOR AUTOMOTIVE • INDUSTRIAL • AGRICULTURAL USE

CHAMPION PNEUMATIC MACHINERY COMPANY
825 NORTH PLEASANT ST., PRINCETON, ILLINOIS

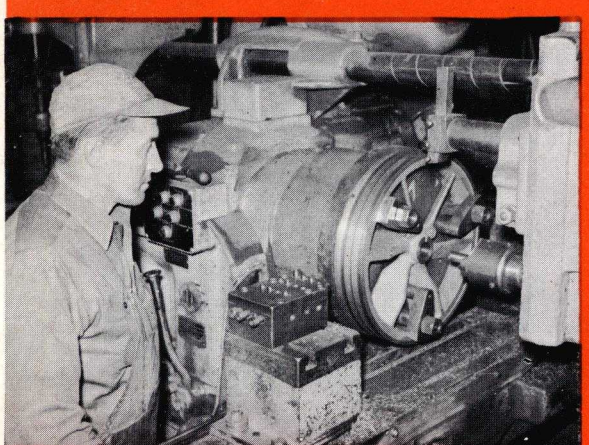
the very best in
EXPERIENCE
DESIGN
SERVICE

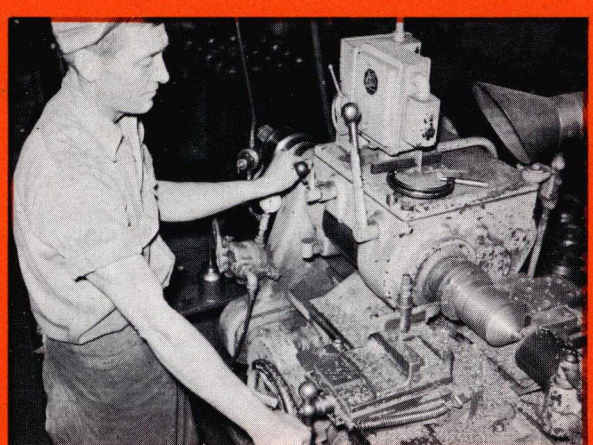
CHAMPION

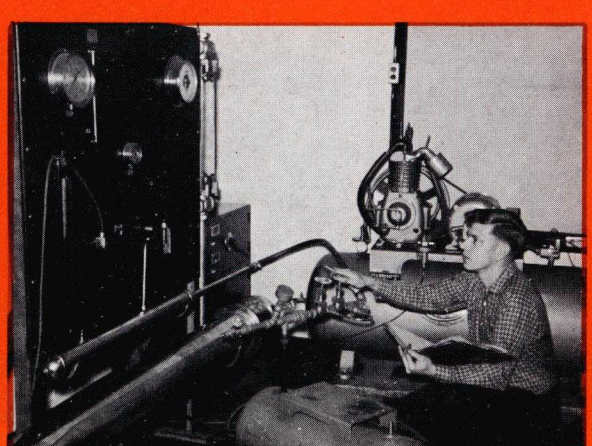


Champion engineering and manufacturing facilities are second to none. For more than 37 years, every Champion Air Compressor has been designed and built to one overall specification—Efficient, Economical and Long-Life SERVICE!

Constant research, broad experience, skilled labor and the most modern production facilities, coupled with the use of the finest material and backed by an experienced service organization, add up to the very best—the CHAMPION Air Compressor!

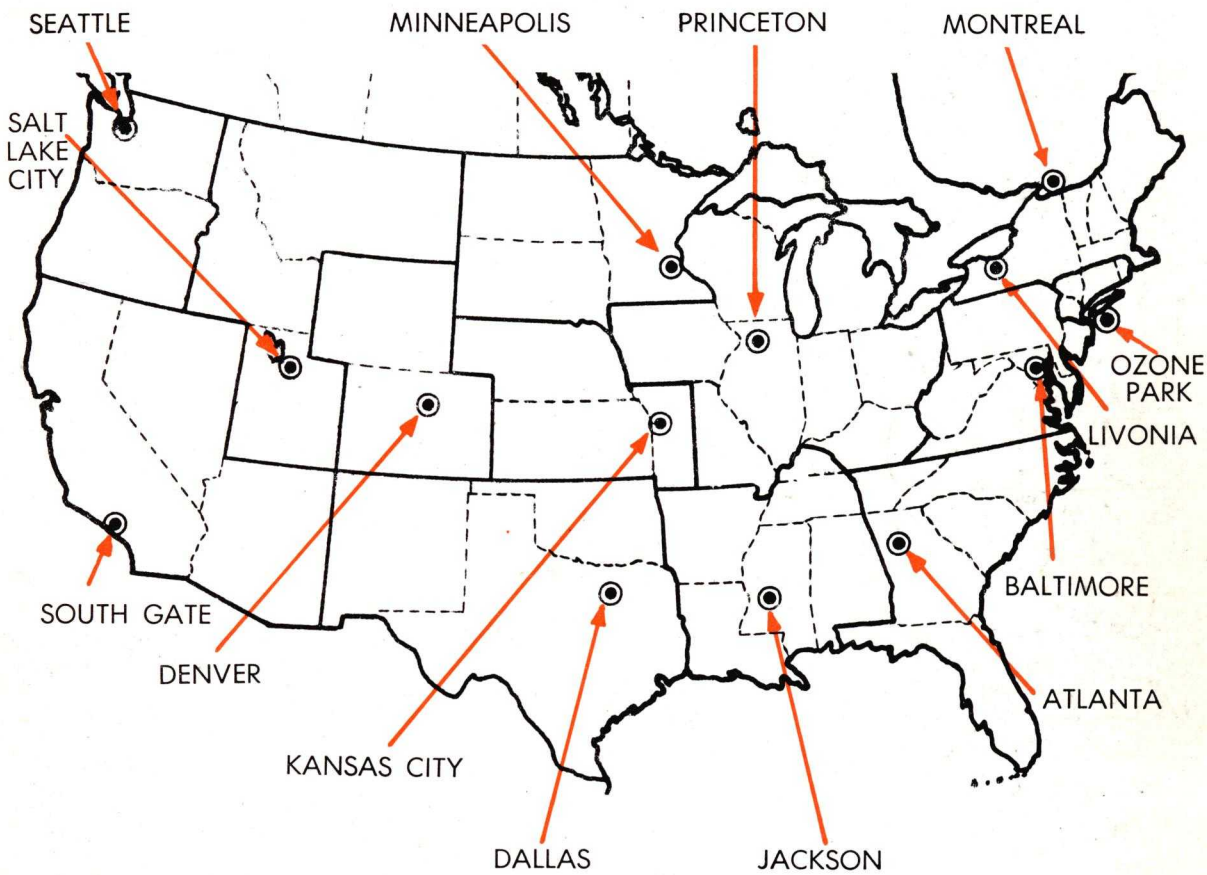






CHAMPION

THE SERVICE BEHIND THE PRODUCT

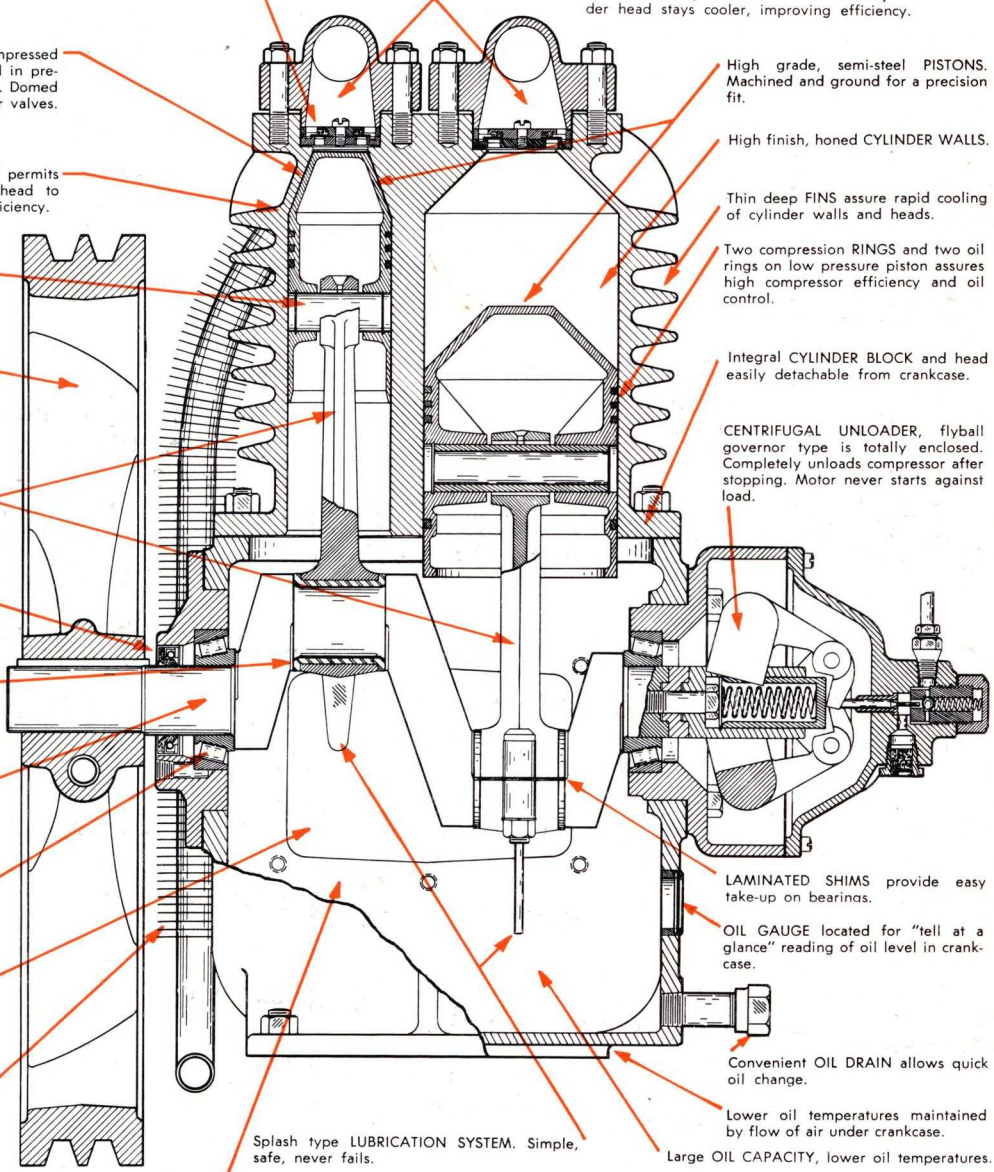


This nation-wide network of AUTHORIZED CHAMPION PARTS DEPOTS located in strategic areas enables the users of CHAMPION AIR COMPRESSORS to readily obtain repair parts at any time.

Coupled with the CHAMPION PUMP EXCHANGE PLAN, this system provides the finest factory service available in the compressor industry.

OUTSTANDING FEATURES MAKE A CHAMPION

CHAMPION



One unit plate VALVES operate in large unrestricted air flow area. Quiet, quick acting, heat and wear resisting.

Large area MANIFOLDS allow unrestricted air flow. Easily removed for valve inspection. Air heated by compression is exhausted from cylinder directly into exhaust manifold. Cylinder head stays cooler, improving efficiency.

DOMED PISTONS keep compressed air and cylinders cooler, aid in preventing oil film break down. Domed design enables use of larger valves. Increases overall efficiency.

High grade, semi-steel PISTONS. Machined and ground for a precision fit.

High finish, honed CYLINDER WALLS.

ABSENCE OF HEAD GASKET permits conduction of heat from head to cooling fins for greater efficiency.

Thin deep FINS assure rapid cooling of cylinder walls and heads.

Two compression RINGS and two oil rings on low pressure piston assures high compressor efficiency and oil control.

Full floating PISTON PINS. Case-hardened and ground with hydrolapped finish.

Integral CYLINDER BLOCK and head easily detachable from crankcase.

Perfectly balanced fan type FLYWHEEL delivers powerful stream of cooling air to cylinders, inter and after-cooler.

CENTRIFUGAL UNLOADER, flyball governor type is totally enclosed. Completely unloads compressor after stopping. Motor never starts against load.

Drop forged CONNECTING RODS with bronze piston pin bushings.

OIL SEAL keeps dirt out, oil in.

Babbitt CONNECTING ROD BEARINGS assure longer service life.

Ground drop forged CRANKSHAFT of highest quality steel.

LAMINATED SHIMS provide easy take-up on bearings.

Tapered roller, MAIN BEARINGS reduce friction and last longer.

OIL GAUGE located for "tell at a glance" reading of oil level in crankcase.

Large HAND HOLE OPENINGS permit simple inspection and servicing.

Convenient OIL DRAIN allows quick oil change.

Finned copper INTERCOOLER directly in fly-wheel air stream.

Lower oil temperatures maintained by flow of air under crankcase.

Splash type LUBRICATION SYSTEM. Simple, safe, never fails.

Large OIL CAPACITY, lower oil temperatures.

Totally ENCLOSED CRANKCASE prevents dirt and grit from entering and contaminating oil.

CHAMPION

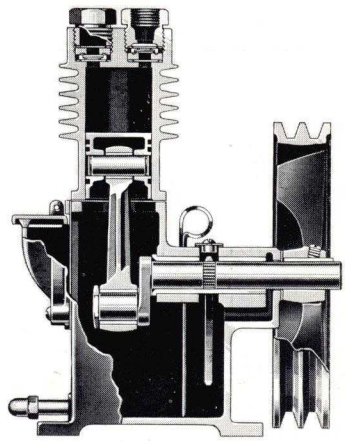
1, 2 AND 4 CYLINDERS **150-200 LBS. MAXIMUM PRESSURE**

SINGLE AND TWO STAGE AIR COMPRESSORS

Less Storage Tanks or Motors

MODEL U-1 SINGLE STAGE COMPRESSORS

have detachable cylinders. Cylinder and Cylinder head cast integral—no head gasket to blow or leak. Piston fitted with three compression rings and one oil ring.



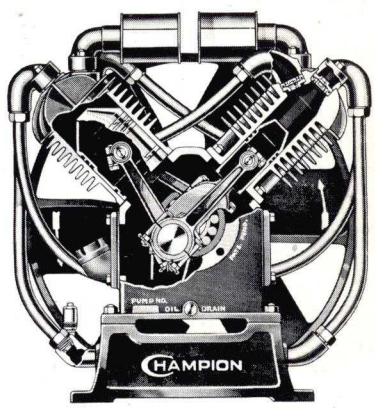
U-1

TWO CYLINDER TWO STAGE COMPRESSORS

(see diagram page 2). Models RE-4, REN-7, REN-10 & REN-14 are two cylinder vertical compressors with integral cast head and cylinder block.

FOUR CYLINDER TWO STAGE COMPRESSORS

Models RE-20 and RE-36 are 4-cylinder "V" type compressors utilizing two 2-cylinder blocks. Air cooled. Includes all the outstanding Champion Quality features listed on page 2 or 4.



RE-20

SPECIFICATIONS

SINGLE STAGE

Model	No. Cyl.	Bore and Stroke	Cubic Feet Displacement	R.P.M.	Max. Working Pressure	Motor Required (H.P.)	Size Flywheel Inches	No. "V" Belts Req.	Net Weight	Shipping Weight	Export Weight	Cubic Feet
U-1	1	2½x2	2.7 to 3.5	460-610	150	½- ¾	10⅛x2¾	1	50	70	90	3

TWO STAGE

RE-4	2	3¼-1¾x2⅛	4 to 5.1	390-500	200	¾-1	16⅜x2½	2	140	160	205	11
REN-7	2	3¼-1¾x3	7.2	500	200	1½	16⅜x2½	2	165	185	230	11
REN-10	2	3¾-2 x3	9.8	510	200	2	16⅜x2½	2	170	190	235	11
REN-14	2	4⅝-2½x3	14.9 to 20	510-680	200	3-5	16⅜x2½	2	180	200	245	11
RE-20	4	3¾-2 x3	21	530	200	5	19⅜x3 3/16	4	285	320	365	13
RE-36	4	4⅝-2½x3	31 to 40	530-680	200	7½-10	19⅜x3 3/16	4	315	350	395	13

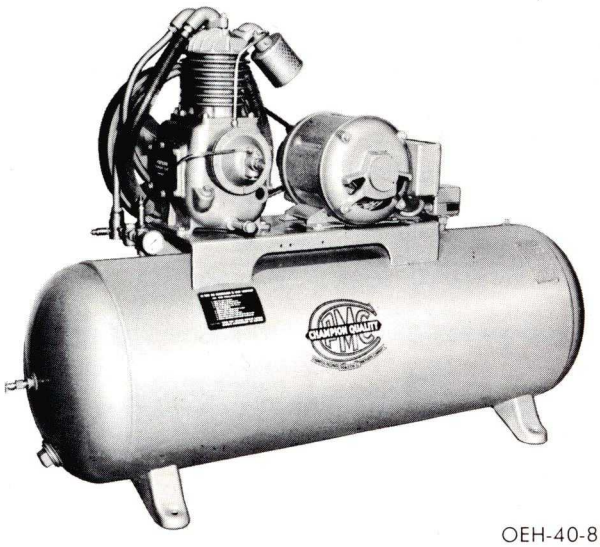
TWO STAGE AUTOMATIC COMPRESSORS

Horizontal Models

CHAMPION

1 H.P. to 5 H.P.
200 LBS. MAXIMUM PRESSURE

Champion Two Stage Horizontal Compressors are unsurpassed for economical, safe and long-life operation. Outstanding Champion quality features incorporated in these compressors give maximum efficiency with a minimum of power required for the air delivered.

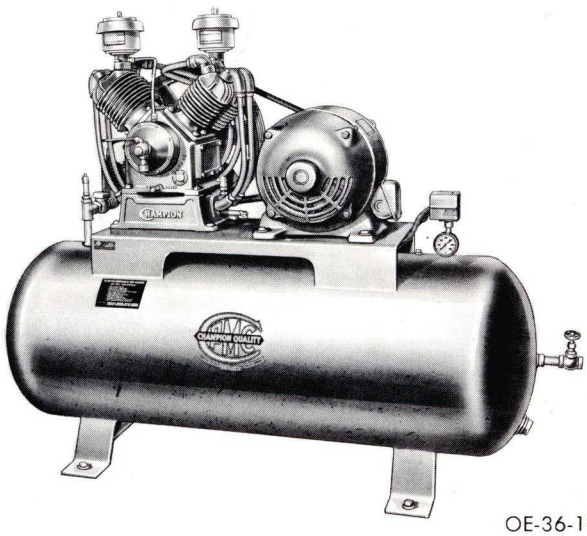


OEH-40-80

FOUR CYLINDER "V" TYPE
5 H.P. TO 10 H.P.
200 LBS. MAXIMUM PRESSURE

Here are the large volume compressed air units needed for super service stations, large garages and car dealer service shops. Recommended for operation of multiple installations of air lifts, pneumatic greasing systems, inflation of bus and truck tires and for industrial use. Smooth running and quiet in operation. Vibration is reduced to a minimum for longer life.

Automatic controller set for tank pressure between 140 and 180 lbs. unless otherwise specified. Safety belt guard available. Automatic tank drains can be furnished factory installed.



OE-36-10

SPECIFICATIONS

TWO CYLINDER MODELS

Model	No. Cyl.	Bore and Stroke	R.P.M.	Cubic Feet Displacement	Motor H.P.	Size Tank Gallons	Max. Working Pressure	DIMENSIONS, INCHES			WEIGHT LBS.		EXPORT	
								Length	Width	Height	Net	Shipping	Gross Weight	Cubic Feet
OE-34-60	2	3¼-1¾x2⅛	500	5.1	1	60	200	48	24½	52	460	505	615	43
OEH-38-60	2	3¼-1¾x3	510	7.2	1½	60	200	48	24½	52	495	545	655	43
OEH-38-80	2	3¼-1¾x3	510	7.2	1½	80	200	62	24	54	555	640	755	54
OEH-40-60	2	3¾-2 x3	510	9.8	2	60	200	48	24½	52	525	575	685	43
OEH-40-80	2	3¾-2 x3	510	9.8	2	80	200	62	24	54	570	660	770	54
OEH-418	2	4⅝-2½x3	510	14.9	3	80	200	62	24	54	630	720	830	54
OEH-458	2	4⅝-2½x3	680	20.0	5	80	200	62	27	54	660	750	860	54

FOUR CYLINDER MODELS

OE-42-80	4	3¾-2 x3	530	21.0	5	80	200	62	27	54	770	860	970	54
OE-36-80	4	4⅝-2½x3	530	31.0	7½	80	200	62	27	54	865	955	1065	54
OE-36-120	4	4⅝-2½x3	530	31.0	7½	120	200	72	30	55	1030	1220	1490	95
OE-36-10	4	4⅝-2½x3	680	40.0	10	120	200	72	30	55	1050	1240	1510	95

CHAMPION

TWO STAGE AUTOMATIC COMPRESSORS

Vertical Models

TUV-55-80

1 H.P. TO 5 H.P.
200 LBS. MAXIMUM PRESSURE

Champion Two Stage Vertical models are designed to conserve floor space. They are adapted to meet fully all compressor requirements in the minimum space inherent in modern station design. They will prove ideal in garages and in industrial applications where service space means money.

All the outstanding Champion quality features are incorporated in these sturdy upright models. Holes are provided in the feet for anchoring. These models are balanced for safety, cannot fall over.

SPECIFICATIONS

Model	No. Cyl.	Bore and Stroke	R.P.M.	Cubic Feet Displacement	Motor H.P.	Size Tank Gallons	Max. Working Pressure	DIMENSIONS, INCHES			WEIGHT, LBS.		EXPORT	
								Length	Width	Height	Net	Shipping	Gross Weight	Cubic Feet
TU-53-60	2	3¼-1¾x2⅛	500	5.1	1	60	200	39	27	81	470	560	670	49
TUV-54-60	2	3¼-1¾x3	510	7.2	1½	60	200	39	27	81	480	570	680	49
TUV-54-80	2	3¼-1¾x3	510	7.2	1½	80	200	39	31	81	540	630	740	56
TUV-55-60	2	3¾-2 x3	510	9.8	2	60	200	39	27	81	510	600	710	49
TUV-55-80	2	3¾-2 x3	510	9.8	2	80	200	39	31	81	570	670	780	56
TUV-57-80	2	4⅝-2½x3	510	14.9	3	80	200	39	31	81	640	740	850	56
TUV-458	2	4⅝-2½x3	680	20.0	5	80	200	39	31	81	700	760	870	56

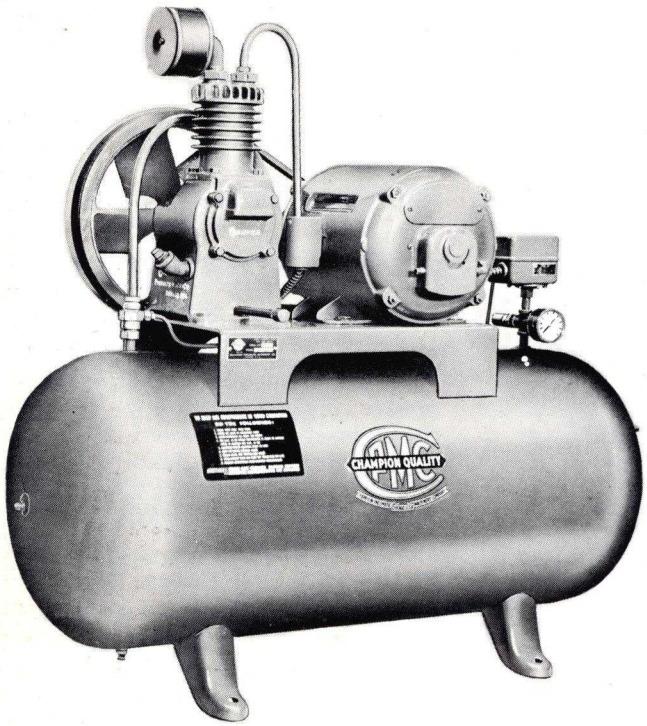
OUTSTANDING FEATURES OF CHAMPION TWO STAGE AUTOMATIC COMPRESSORS:

1. Totally Enclosed Crankcase with patented crankshaft seal.
2. Totally Enclosed Centrifugal Unloader which automatically unloads compressor every time current is cut off. Motor never starts against load.
3. Honed Cylinders give higher efficiency, cut friction losses.
4. Domed Cylinders and Pistons prevent overheating and oil film breakdown.
5. Thin, Quiet Plate Valves are wear resisting, quick acting.
6. Roller-Type Main Bearings, babbitt-lined connecting rod bearings.
7. Drop-Forged Crankshaft and connecting rods.
8. Copper Finned Intercooler mounted directly in stream of large diameter fan blade flywheel for positive cooling action.
9. Patented After Cooler.
10. Multiple "V" Belt Drive running in grooved pulleys are smooth and quiet in operation.
11. Automatic Pressure Switch cuts in and out to maintain pressure level.

NOTE: A safety belt guard is available for 1 H.P. models and up. Automatic tank drains can be furnished factory-installed.

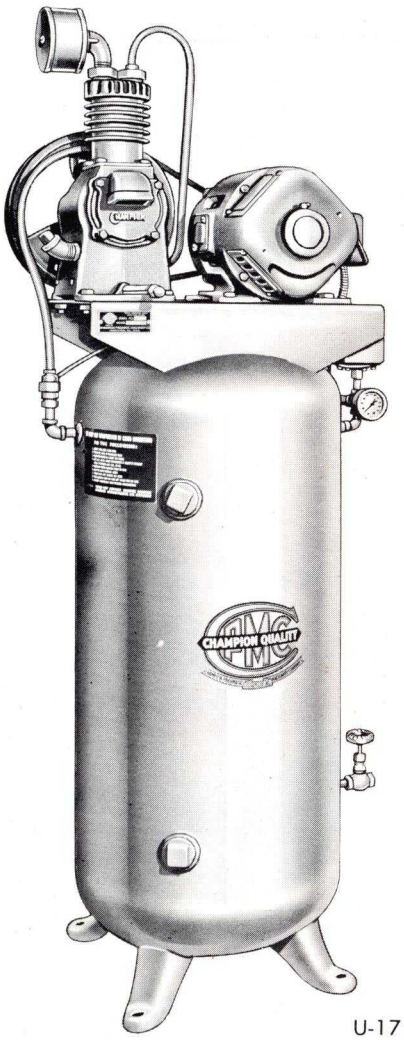
SINGLE STAGE AUTOMATIC COMPRESSORS

CHAMPION



X-18

SINGLE CYLINDER MODELS
1/2 H.P. TO 3/4 H.P.
150 LBS. MAXIMUM PRESSURE



U-17

Here are efficient Champion Air Compressors for intermittent automotive and similar service in the 150 lb. pressure range. Incorporating all of the outstanding Champion Quality features, these models are ideal for the services listed.

Models U-17 and U-18 are vertical types comparable with horizontal Models X-17 and X-18.

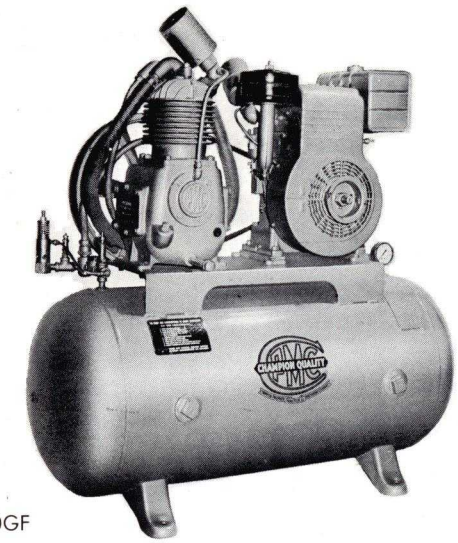
All models are equipped with pressure switch release valves to unload compressor each time it stops automatically. Pressure switch set to cut in at 120 and out at 150 lbs. P.S.I.

SPECIFICATIONS

Model	No. Cyl.	Bore and Stroke	R.P.M.	Cubic Feet Displacement	Motor H.P.	Size Tank Gallons	Max. Working Pressure	DIMENSIONS, INCHES			WEIGHT LBS.		EXPORT	
								Length	Width	Height	Net	Shipping	Gross Weight	Cubic Feet
X-17	1	2½x2	460	2.7	½	30	150	41	20	42	200	235	280	20
X-18	1	2½x2	610	3.5	¾	30	150	41	20	42	210	245	280	20
U-17	1	2½x2	460	2.7	½	30	150	24	18	60	200	260	315	15
U-18	1	2½x2	610	3.5	¾	30	150	24	18	60	210	270	325	15

CHAMPION

AIR COMPRESSORS GASOLINE ENGINE DRIVE



OEH-40-60GF

SINGLE AND TWO STAGE MODELS 1 1/2 H.P. TO 8.4 H.P.

These rugged compressors are designed for use where electric power is not available. Dependable in operation, they have found wide acceptance among outlying service stations, garages, tourist camps and on tire service trucks. The two stage models are ideal for use with portable lubrication equipment for servicing tractors and road building units. Sturdy, dependable air-cooled engines start quickly without load. Model X-18G has a bleeder unloader, and all other models have constant speed unloaders as optional equipment.

SPECIFICATIONS

TWO STAGE

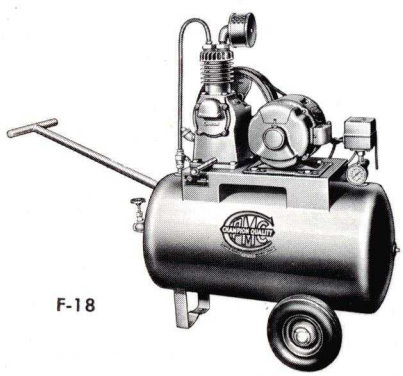
Model	No. Cyl.	Bore and Stroke	R.P.M.	Cubic Feet Displacement	Motor H.P.	Size Tank Gallons	Max. Working Pressure	DIMENSIONS, INCHES			WEIGHT, LBS.		EXPORT	
								Length	Width	Height	Net	Shipping	Gross Weight	Cubic Feet
OE-34-60G	2	3¼-1¾x3	500	5.1	2	60	175	48	24½	52	410	460	610	43
OEH-40-60GF	2	3¾-2 x3	510	9.8	4	60	175	48	24½	52	500	550	660	43
OEH-418GF	2	4⅝-2½x3	510	14.9	5	80	175	62	24	54	620	670	780	54
OE-42-80GF	4	3¾-2 x3	600	23.0	8.4	80	175	62	27	54	770	820	930	54

SINGLE STAGE

X-18G	1	2½x2	770	4.4	1.5	30	150	41	20	42	185	220	255	20

Safety Belt Guards and Automatic Tank Drains are available for all models except X-18-G.

PORTABLE COMPRESSORS



F-18

GASOLINE OR ELECTRIC MOTOR DRIVE 1/2 H.P. to 1 1/2 H.P., 125 LBS. MAXIMUM PRESSURE

These new Champion Portable Compressors are ruggedly built, providing 125 lbs. working pressure and large 20 gallon tanks just right for tire inflation, lubrication, spraying, cleaning, etc. Ideal for farm use, for use with road building and other construction machinery—anywhere the need for an efficient, portable compressor exists. Includes rubber tired wheels. Has long handle for easy maneuverability.

SPECIFICATIONS

Model	Cubic Feet Displacement	Motor H.P.	Tank Gals.	Bore and Stroke	Working Pressure, Lbs.	DIMENSIONS, INCHES			WEIGHT		EXPORT	
						Length	Width	Height	Net	Shipping	Weight	Cu. Feet
F-17	3.0	½	20	2½x2	125	36	18	33	155	180	245	17
F-18	3.7	¾	20	2½x2	125	36	18	33	170	195	260	17
F-18G	4.4	1½	20	2½x2	125	36	18	33	155	180	245	17

TIRE SERVICE COMPRESSOR

CHAMPION

The Champion Tire Service Compressor has a "heart of steel" . . . *precision-designed* with proven automotive-type features for dependability and economy . . . *action-built* of the finest materials for stamina!

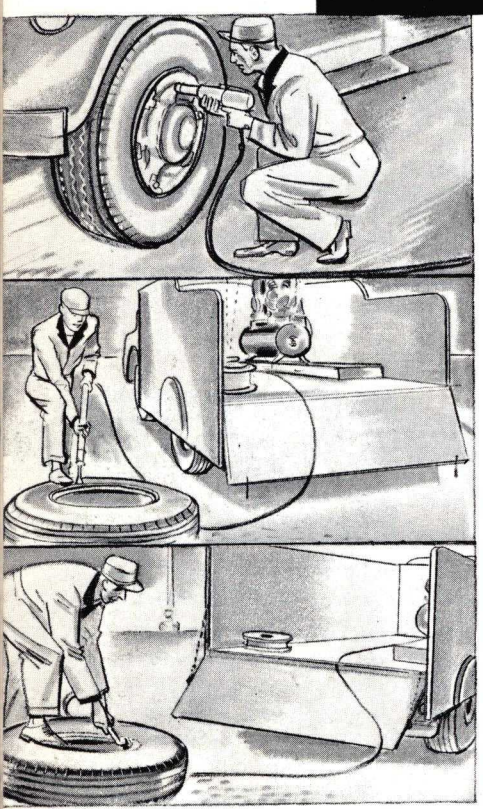
WISCONSIN ENGINE—Each **OEH-453-GF** Compressor is equipped with a dependable 4-cycle gasoline engine that develops 7.7 H.P. An electric starter gives quick starts . . . speeds service.

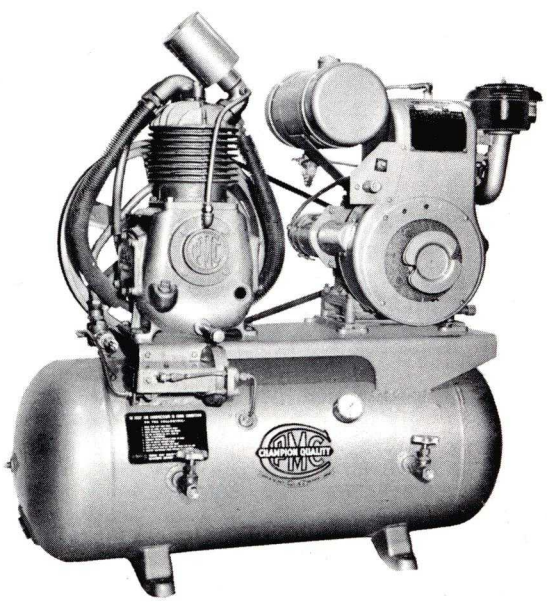
CONSTANT SPEED UNLOADER — The Champion constant speed unloader opens and closes the air intake — automatically — to meet the demand for air while the compressor runs at a constant 680 rpm.

STORAGE TANK — Champion Model OEH-453GF has all equipment mounted on an air receiver with a total volume of 30 gallons. Conveniently located drain valve simplifies periodic residue removal.

Optional equipment: A safety belt guard is available for personnel protection where desired.

DEPENDABLE . . . TROUBLE-FREE OPERATION





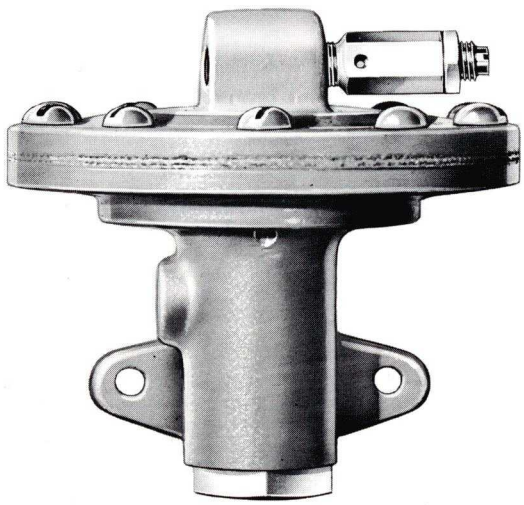
OEH-453-GF

SPECIFICATIONS

Model	No. Cyl.	Bore and Stroke	R.P.M.	Delivered Air C.F.M.	Motor H.P.	Size Tank Gallons	Max. Working Pressure	Dimensions, Inches			Weight, Lbs.		Export	
								Length	Width	Height	Net	Shipping	Gross Weight	Cubic Feet
OEH-453-GF	2	4⅝-2½x3	680	20	7.7	30	200	41	20	49	500	550	585	23

CHAMPION

AUTOMATIC TANK DRAIN VALVE



The same rugged dependability that makes Champion the performance leader in the compressor field is incorporated in the Automatic Tank Drain Valve. Its dependable automatic operation allows you to install it—and forget it! With Champion, you get a LARGER, LONGER-LASTING DIAPHRAGM which assures positive valve opening action at low exhaust pressures. TIMER CONTROL and large valve discharge chamber gives faster, complete cleaning with MINIMUM AIR LOSS. WIDER-RANGE ADJUSTABLE TIMER assures full drainage under heaviest air-moisture conditions. DIRECT EJECTION means there are no screens or filters to clean—no chance for residue to collect and hamper operation. RUSTPROOF special aluminum alloy construction for long trouble-free service.

The Champion Automatic Tank Drain Valve is available factory-installed, or for installation on your present compressor.

OVERHEAD WATER — AIR HOSE REELS

SAVE TIME
- Always within easy reach
- Stays at desired length
- Slight pull rewinds

ACCESSIBLE
- Housing easily removed
- Inspection-adjustment plate

PRECISION BUILT
- Special spring steel motor spring
- Governor controls speed
- Brake holds hose secure

CUT COST
- Longer hose life
- Fully enclosed reel housing
- Brake controlled hose rewind

SAFE
- Keeps Hose off-the-floor

CHAMPION REELS
30 ft. 5/16″ air hose furnished.

ER-2 ES-3

SPECIFICATIONS

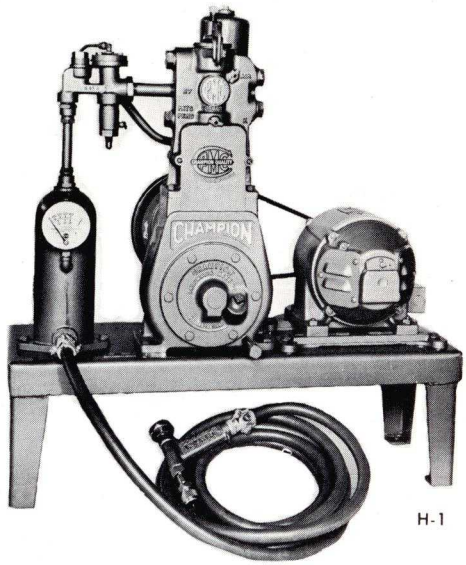
Type	Shipping Weight	Dimensions
ER-2 Air Hose	75 lbs.	7½″ x 25″
ER-2W Water Hose	75 lbs.	7½″ x 25″
ES-3 Air Hose	75 lbs.	10″ x 26½″
ES-3W Water Hose	75 lbs.	10″ x 26½″

HIGH PRESSURE WASHERS

CHAMPION

"TYPE H" HIGH PRESSURE WASHERS

Here are three models of the popular Champion Washer. These heavy duty machines will give years of trouble-free service with a minimum of maintenance. All parts are made and assembled by Champion. This means low initial cost plus easily obtainable replacement parts when needed. Precision construction results in extremely quiet operation. H-1, H-2 and H-2-3 models deliver 5, 7 and 14 gallons of water per minute at 300 lbs. pressure to wash a car quickly and easily.



H-1

FEATURES

Silent Drive—double reduction drive of helical gears and "V" belt.

Pressure Control and Unloader—when gun is shut off, water by-passes, washer runs against no load.

Double Acting Cylinder.

Filtering Trap—keeps out dirt.

Crankcase—totally enclosed. Keeps water out.

Piston Rod—ground stainless steel.

Brass Valves and Seats—all interchangeable.

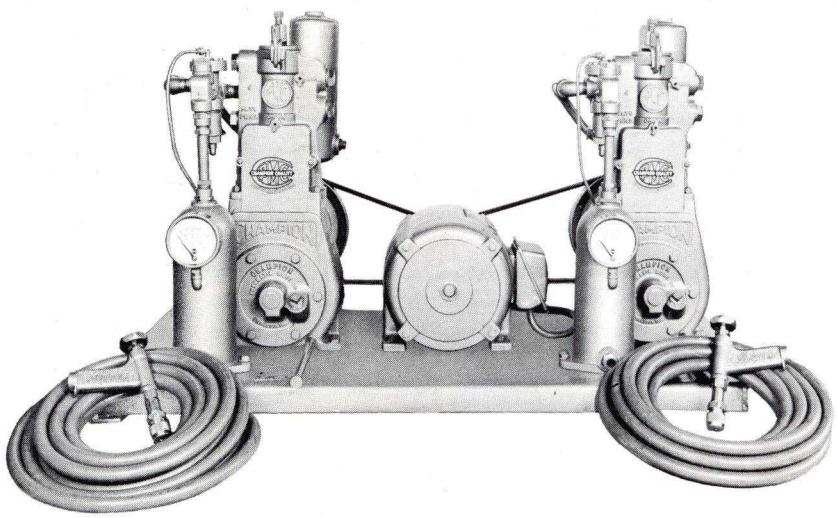
Hose—½" I.D. high pressure hose.

Base Plate—heavy steel construction.

Self-Lubricating.

Accessories—available at extra cost. 8-foot suction hose with strainer. Safety belt guard. Model H-2-3 is equipped with 2 guns but is available on order with one 14g.p.m. 300 lb. gun for production work.

The CHAMPION GUN—furnished with the "Type H" Washer, is designed and manufactured exclusively for high pressure washing. Provides a powerful cutting stream or can be adjusted for fine spray without reducing water supply through the nozzle. Special non-corrosive hardened steel nozzle disc assures long service life. Pistol grip handle eliminates operator fatigue.



H-2-3

SPECIFICATIONS

Model	No. Guns	Motor H.P.	Gallons Water Minute	Bore and Stroke	Water Press. Lbs.	Intake Pipe Size	DIMENSIONS, INCHES			WEIGHT, LBS.		EXPORT	
							Length	Width	Height	Net	Ship-ping	Gross Weight	Cubic Feet
H-1	1	1	5	1¾"x1½"	300	¾"	37	15	40	290	315	360	21
H-2	1	1½	7	2" x1½"	300	¾"	37	15	40	310	335	380	21
H-2-3	2	3	14	2" x1½" (2 Pumps)	300	1"	56	32	38	570	620	710	32

VOLUME OF COMPRESSED AIR IN CUBIC FT. REQUIRED PER STROKE TO OPERATE AIR CYLINDER

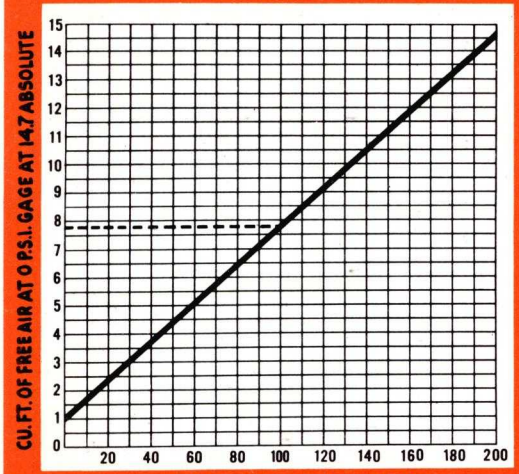
These volumes are for single acting cylinders. For double acting cylinders, multiply by two and substract the volume of the piston rod.

Piston Dia. in Inches	LENGTH OF STROKE IN INCHES											
	1	2	3	4	5	6	7	8	9	10	11	12
1¾	.00139	.00278	.00416	.00555	.00694	.00832	.00972	.0111	.0125	.0139	.0153	.01665
1⅞	.00158	.00316	.00474	.00632	.0079	.00948	.01105	.01262	.0142	.0158	.0174	.01895
2	.00182	.00364	.00545	.00727	.0091	.0109	.0127	.0145	.01636	.0182	.020	.0218
2⅛	.00205	.0041	.00615	.0082	.01025	.0123	.0144	.0164	.0185	.0205	.0226	.0246
2¼	.0023	.0046	.0069	.0092	.0115	.0138	.0161	.0184	.0207	.0230	.0253	.0276
2⅜	.00256	.00512	.00768	.01025	.0128	.01535	.01792	.02044	.0230	.0256	.0282	.0308
2½	.00284	.00568	.00852	.01137	.0142	.0171	.0199	.0228	.0256	.0284	.0312	.0343
2⅝	.00313	.00626	.0094	.01254	.01568	.0188	.0219	.0251	.0282	.0313	.0345	.0376
2¾	.00343	.00686	.0106	.0137	.0171	.0206	.0240	.0272	.0308	.0343	.0378	.0412
2⅞	.00376	.00752	.0113	.01503	.01877	.0226	.0263	.0301	.0338	.0376	.0413	.045
3	.00409	.00818	.0123	.0164	.0204	.0246	.0286	.0327	.0368	.0409	.0450	.049
3⅛	.00443	.00886	.0133	.0177	.0222	.0266	.0310	.0354	.0399	.0443	.0488	.0532
3¼	.0048	.0096	.0144	.0192	.024	.0288	.0336	.0384	.0432	.0480	.0529	.0575
3⅜	.00518	.01036	.0155	.0207	.0259	.031	.0362	.0415	.0465	.0518	.057	.062
3½	.00555	.0112	.0167	.0222	.0278	.0333	.0389	.0445	.050	.0556	.061	.0666
3⅝	.00595	.0119	.0179	.0238	.0298	.0357	.0416	.0477	.0536	.0595	.0655	.0715
3¾	.0064	.0128	.0192	.0256	.032	.0384	.0447	.0512	.0575	.064	.0702	.0766
3⅞	.0068	.01362	.0205	.0273	.0341	.041	.0477	.0545	.0614	.068	.075	.082
4	.00725	.0145	.0218	.029	.0363	.0435	.0508	.058	.0653	.0725	.0798	.087
4⅛	.00773	.01547	.0232	.0309	.0386	.0464	.0541	.0618	.0695	.0773	.0851	.093
4¼	.0082	.0164	.0246	.0328	.041	.0492	.0574	.0655	.0738	.082	.0903	.0985
4⅜	.0087	.0174	.0261	.0348	.0435	.0522	.0608	.0695	.0782	.087	.0958	.1042
4½	.0092	.0184	.0276	.0368	.046	.0552	.0643	.0735	.0828	.092	.101	.1105
4⅝	.0097	.0194	.0291	.0388	.0485	.0582	.0679	.0775	.0873	.097	.1068	.1163
4¾	.01025	.0205	.0308	.041	.0512	.0615	.0717	.0818	.0922	.1025	.1125	.123
4⅞	.0108	.0216	.0324	.0431	.054	.0647	.0755	.0862	.097	.108	.1185	.1295
5	.0114	.0228	.0341	.0455	.0568	.0681	.0795	.091	.1023	.114	.125	.136
5⅛	.01193	.0239	.0358	.0479	.0598	.0716	.0837	.0955	.1073	.1193	.1315	.1435
5¼	.0125	.0251	.0376	.0502	.0627	.0753	.0878	.100	.1128	.125	.138	.151
5⅜	.0131	.0263	.0394	.0525	.0656	.0788	.092	.105	.118	.131	.144	.158
5½	.01375	.0275	.0412	.055	.0687	.0825	.0962	.110	.1235	.1375	.151	.165
5⅝	.0144	.0288	.0432	.0575	.072	.0865	.101	.115	.1295	.144	.1585	.173
5¾	.015	.030	.045	.060	.075	.090	.105	.120	.135	.150	.165	.180
5⅞	.0157	.0314	.047	.0628	.0785	.094	.110	.1254	.142	.157	.1725	.188
6	.0164	.0328	.0492	.0655	.082	.0983	.1145	.131	.147	.164	.180	.197
6⅛	.0171	.0342	.0513	.0685	.0855	.1027	.120	.137	.154	.171	.188	.205
6¼	.0178	.0356	.0533	.071	.089	.107	.125	.142	.160	.178	.196	.214
6⅜	.01845	.0369	.0555	.074	.0925	.111	.129	.148	.166	.1845	.203	.222
6½	.0192	.0384	.0575	.0768	.096	.115	.134	.153	.173	.192	.211	.230
6⅝	.020	.040	.060	.080	.100	.120	.140	.160	.180	.200	.220	.240
6¾	.0207	.0414	.062	.0828	.1035	.124	.145	.166	.1865	.207	.228	.248
6⅞	.0215	.043	.0645	.086	.1075	.129	.150	.172	.193	.215	.236	.258
7	.0223	.0446	.067	.0892	.1115	.1336	.156	.178	.200	.223	.245	.268
7⅛	.0231	.0462	.0692	.0924	.1154	.1385	.162	.185	.208	.231	.254	.277
7¼	.0239	.0477	.0716	.0955	.119	.143	.167	.191	.215	.239	.263	.286
7⅜	.0247	.0495	.0742	.099	.124	.1485	.173	.198	.223	.247	.272	.297
7½	.0256	.0512	.0768	.105	.128	.1538	.1792	.205	.232	.256	.282	.307

SELECTING AIR COMPRESSOR

CHAMPION

RATIO OF COMPRESSION



COMPRESSOR TANK STORAGE CAPACITY

Diameter x Length		14" x 36"	14" x 48"	20" x 48"	20" x 60"	24" x 72"
Normal	Gallons	22	32	60	80	140
Capacity	Cu. Ft.	2.9	4.0	8.0	.0.2	.8.8
Capacity	100 lbs.	22.6	31.2	62.4	79.6	146.8
Cubic Feet	125 lbs.	27.5	38.0	76.0	96.9	178.7
Free Air	150 lbs.	32.5	44.8	89.6	114.2	210.2
At pressures	175 lbs.	37.4	51.6	103.2	131.5	148.9
Given	200 lbs.	42.3	58.4	116.8	148.9	274.3

Gage Pres. in Receiver (Lbs.)	FLOW OF FREE AIR (CU. FT. PER MIN.) THROUGH ORIFICES OF VARIOUS DIAMETERS							
	1/64"	1/32"	3/64"	1/16"	3/32"	1/8"	3/16"	1/4"
1	.027	.107	.242	.430	.97	1.72	3.86	6.85
2	.038	.153	.342	.607	1.36	2.43	5.42	9.74
3	.046	.188	.471	.750	1.68	2.98	6.71	11.9
5	.059	.242	.545	.965	2.18	3.86	8.71	15.4
10	.084	.342	.77	1.36	3.08	5.45	12.3	21.8
15	.103	.418	.94	1.67	3.75	6.65	15.0	26.7
20	.119	.485	1.07	1.93	4.25	7.7	17.1	30.8
25	.133	.54	1.21	2.16	4.75	8.6	19.4	34.5
30	.156	.632	1.40	2.52	5.6	10.0	22.5	40.0
35	.173	.71	1.56	2.80	6.2	11.2	25.0	44.7
40	.19	.77	1.71	3.07	6.8	12.3	27.5	49.1
45	.208	.843	1.9	3.36	7.6	13.4	30.3	53.8
50	.225	.914	2.05	3.64	8.2	14.5	32.8	58.2
60	.26	1.05	2.35	4.2	9.4	16.8	37.5	67
70	.295	1.19	2.68	4.76	10.7	19.0	43.0	76
80	.33	1.33	2.97	5.32	11.9	21.2	47.5	85
90	.364	1.47	3.28	5.87	13.1	23.5	52.5	94
100	.40	1.61	3.66	6.45	14.5	25.8	58.3	103
110	.43	1.76	3.95	7.00	15.7	28.0	63	112
120	.47	1.90	4.27	7.58	17.0	30.2	68	121
130	.50	2.04	4.57	8.13	18.2	32.4	73	130
140	.54	2.17	4.87	8.68	19.5	34.5	78	138
150	.57	2.33	5.20	9.20	20.7	36.7	83	147
175	.66	2.65	5.94	10.6	23.8	42.1	95	169
200	.76	3.07	6.90	12.2	27.5	48.7	110	195

The capacity of an air compressor cannot be checked accurately by use of this table and a narrow edge orifice. Specialized equipment is necessary to check compressor capacity.

Example: An air ejector is being used on a punch press. It is connected to an air line with pressure at 120-150 p.s.i. It has a nozzle orifice 3/32 in. in diameter, and, through use of a stop watch, it delivers compressed air for a total of 30 seconds out of each one minute of operation.

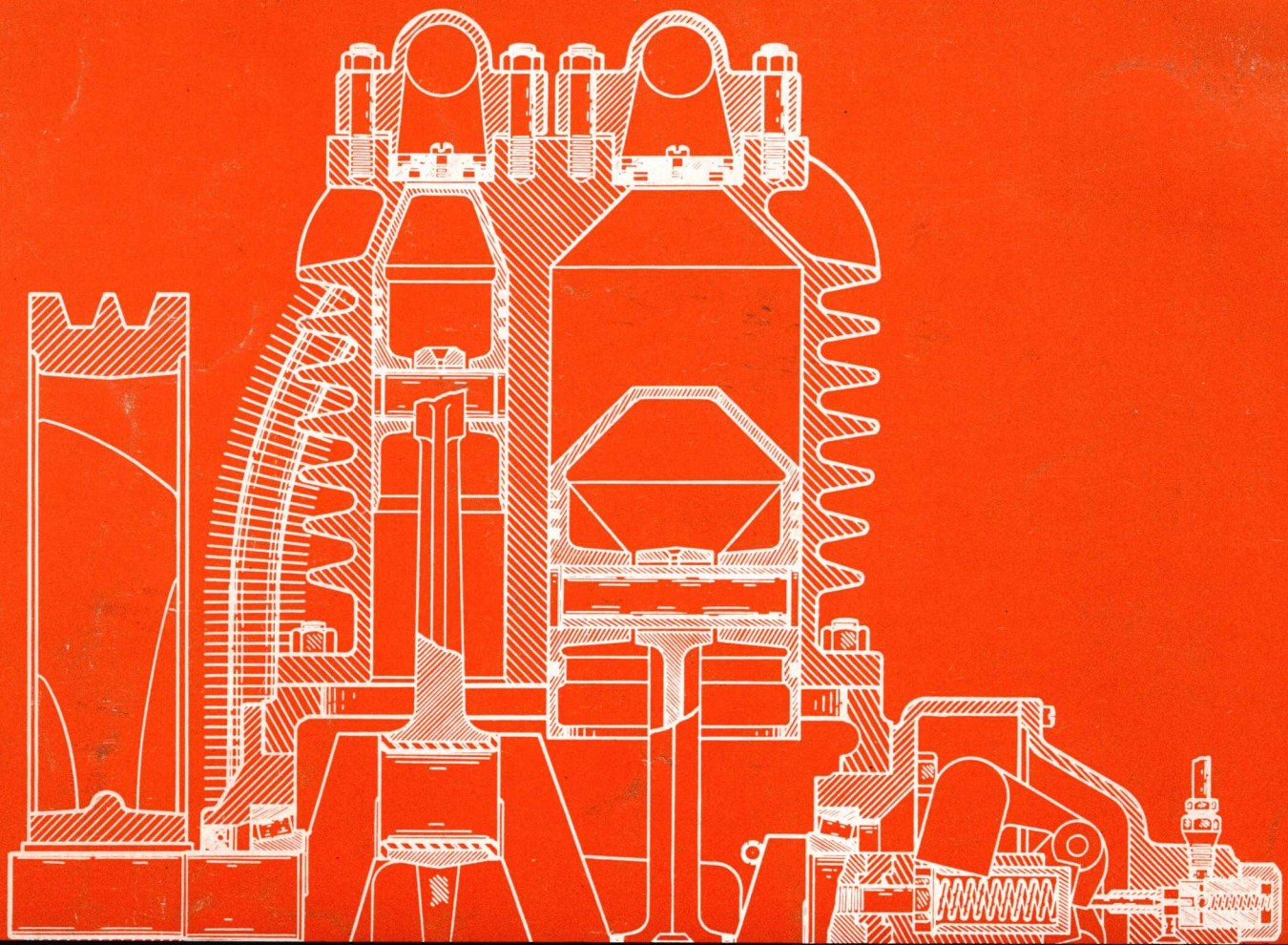
Reference to the chart indicates at 150 p.s.i., a 3/32 in. diameter orifice will allow 20.7 c.f.m. to flow through the nozzle in one minute. However, air flow takes place only for 30 seconds out of each 60 seconds or 30/60 of the time, therefore, only ½ of 20.7 or 10.35 c.f.m. will flow for each elapsed minute.

From Chart No. 2, under the column "Continuous Operation" and opposite the pressure range 120-150 p.s.i., select the air compressor, which will be a 3 HP, 2-stage unit.

HANDY COMPRESSOR SPECIFICATIONS CHART

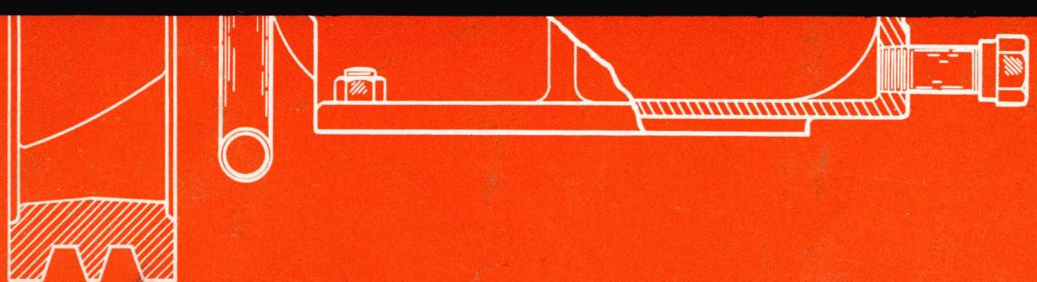
		Equipment No.	Pump No.	No. Cyl.	Bore and Stroke	R.P.M.	C.F.M.	Motor H.P.	Tank
SINGLE STAGE AUTOMATIC COMPRESSORS	ELECTRIC OPERATED	F-17	U-1	1	2½x2	550	3.0	½	20
		F-18	U-1	1	2½x2	650	3.7	¾	20
		X-17	U-1	1	2½x2	460	2.7	½	30
		X-18	U-1	1	2½x2	610	3.5	¾	30
		U-17	U-1	1	2½x2	460	2.7	½	30
		U-18	U-1	1	2½x2	610	3.5	¾	30
	GAS	F-18G	U-1	1	2½x2	770	4.4	1½	20
		X-18G	U-1	1	2½x2	770	4.4	1½	20
TWO STAGE AUTOMATIC COMPRESSORS	ELECTRIC OPERATED	OE-34-60	RE-4	2	3¼-1¾x2⅛	500	5.1	1	60
		OEH-38-60	REN-7	2	3¼-1¾x3	510	7.2	1½	60
		OEH-38-80	REN-7	2	3¼-1¾x3	510	7.2	1½	80
		OEH-40-60	REN-10	2	3¾-2x3	510	9.8	2	60
		OEH-40-80	REN-10	2	3¾-2x3	510	9.8	2	80
		OEH-418	REN-14	2	4⅝-2½x3	510	14.9	3	80
		OEH-458	REN-14	2	4⅝-2½x3	680	20.0	5	80
		OE-42-80	RE-20	4	3¾-2x3	530	21.0	5	80
		OE-36-80	RE-36	4	4⅝-2½x3	530	31.0	7½	80
		OE-36-120	RE-36	4	4⅝-2½x3	530	31.0	7½	120
		OE-36-10	RE-36	4	4⅝-2½x3	680	40.0	10	120
		TU-53-60	RE-4	2	3¼-1¾x2⅛	500	5.1	1	60
		TUV-54-60	REN-7	2	3¼-1¾x3	510	7.2	1½	60
		TUV-54-80	REN-7	2	3¼-1¾x3	510	7.2	1½	80
		TUV-55-60	REN-10	2	3¾-2x3	510	9.8	2	60
		TUV-55-80	REN-10	2	3¾-2x3	510	9.8	2	80
		TUV-57-80	REN-14	2	4⅝-2½x3	510	14.9	3	80
		TUV-458	REN-14	2	4⅝-2½x3	680	20.0	5	80
	GASOLINE	OE-34-60GF	RE-4F	2	3¼-1¾x2⅛	500	5.1	2	60
		OEH-40-60GF	REN-10F	2	3¾-2x3	510	9.8	4	60
		OEH-418GF	REN-14F	2	4⅝-2½x3	510	14.9	5	80
		OEH-458GF	REN-14F	2	4⅝-2½x3	680	20.0	7.7	80
		OEH-453GF	REN-14F	2	4⅝-2½x3	680	20.0	7.7	30
		OE-42-80GF	RE-20F	4	3¾-2x3	600	23.0	8.4	80

Suffix "F" denotes less Centrifugal Unloader.



CHAMPION

AIR COMPRESSORS • CAR WASHERS • HOSE REELS
FOR AUTOMOTIVE • INDUSTRIAL • AGRICULTURAL USE



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